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13. Intentional Pharmaceutical Overdoses Related to Therapeutic Misadventures: A Description of ToxIC Entries

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Background: Drug overdose due to intentional ingestion can be classified into three categories: attempt at self-harm (e.g., suicide), due to recreational misuse/abuse, or due to therapeutic misadventure. In 2014, the ACMT ToxIC Case Registry added these classifications to Intentional Pharmaceutical Poisonings. The ToxIC Registry includes all patients seen at the registered sites by a medical toxicologist. Hypothesis: Cases of overdose due to therapeutic use would demonstrate a unique distribution of drug classes involved, but the distributions of severity and treatments given would be relatively normative with regard to all types of intentional overdose.

Methods: Retrospective review (1/2014–11/2014) of the ACMT ToxIC Case Registry analyzing data from the therapeutic use cases. Analysis was performed using descriptive statistics.

Results: Of 3,318 cases involving intentional pharmaceutical overdose, 375 cases with therapeutic use were identified. These cases were skewed toward the adult population (62 % 19–65 years and 26 % >65 years). Most cases (68 %) involved a single drug. The most common classes of drugs involved were cardiovascular medications (18 %), lithium (15 %), anticonvulsants (13 %), antidepressants (10 %), antipsychotics (10 %), and opioids (9 %). Overdose severity, as approximated by the number of organ systems/vital sign abnormalities involved, was positively skewed, with 64 % having one major clinical outcome, and 31 % with two or three organ systems involved, and 5 % with four to six organ system findings. With regard to the distribution of treatments given, 41 % received no treatment/support, 36 % received one treatment, 17 % received two treatments, and 6 % received three to four treatments. ToxIC toxidrome data were identified in 50 cases (13 %), with 20 (5 % total) diagnosed with serotonin syndrome and 12 (3 % total) an opioid toxidrome.

Discussion: The ToxIC Case Registry represents a novel mechanism for understanding the more severe types of poisonings that require medical toxicology consultation. Identifying the agents responsible and illness severity from exposure may inform prescribing and preventative practices may lead to decreases in this type of exposure in the future.

Conclusions: Data from the ToxIC Registry involving therapeutic use help characterize and understand the more severe type of intoxications associated with this type of ingestion.